GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:45
ANSWERED ON:16.11.2016
Weather Forecast
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Will the Minister of EARTH SCIENCES be pleased to state:

(a) Whether weather predictions at sub-local level is not accurate;

(b) if so, the details thereof and the reasons therefor;

(c) the steps taken by the India Meteorological Department (IMD) to refine the data provided to Automatic Weather Centres (AWCs), Automatic Rain Gauge (ARG) and other meteorological projects designed for agricultural activities;

(d) the details of subscription base of agro-meteorological subscribers for weather related information, State-wise; and

(e) if not, the details therefor of the result of satisfaction as designed as feedback process for this metrological data?

Answer

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a-b) Currently weather forecast is generated at 22 km grid scale over India (up to five days in advance) for formulating weather based agro-meteorological advisories at district level.

As a part of on-going process, performance of district level weather forecast issued for different districts in the country is verified against observed weather for last 12 months. It has been observed that the forecast accuracy is very good in East and Central regions and modest in Northwest, West and South India. The forecast is not up to the desired expectation for Northeast region for hilly regions as well as for high rainfall events. The accuracy of the weather forecast is more than 80% qualitatively and 65-70% quantitatively for various regions in the country.

(c) The realized weather data collected from different observatories (Surface, Agro-met, Automatic Weather stations (AWS), Automatic Rain Gauge (ARG) etc.) are used along with weather forecast to generate the Agro Meteorological advisories after proper quality check. At present there are 688 AWS and 1350 ARGs.

(d) The Agro meteorological Advisory Services (AAS) bulletins are prepared bi-weekly along with the forecast and issued to the farmers through multimedia channel and also through SMS using Kisan portal launched by the Ministry of Agriculture for taking decision on farm operations based on weather. At present, 19.51 million farmers are directly subscribing and have benefitted by the AAS bulletins in SMS and IVRS free of cost. The Status of Dissemination of Agro-advisories for October 2016 is given in Annexure-I.

(e) As per the recent National Council of Applied Economic Research (NCAER) report, farming community of the country is using the Gramin Krishi Mausam Seva (GKMS) service products of IMD for critical farm operations Viz. i) Management of sowing (Delayed onset of rains); ii) Changing crop variety (Delay in rainfall); iii) Spraying Pesticides for disease control (occurrence of rainfall); iv) Managing Irrigation (Heavy rainfall Forecast). According to a survey, the agriculture specific forecasts of IMD have been found reliable by more than 93 percent of Indian formers. 95% of the farmers say that forecasts of IMD have improved during last 2-4 years. Further, most of the farmers felt that there had been an improvement in the timeliness of the weather forecasts. Among various components of weather elements, rainfall component has the highest priority. Concurrently, with the implementation of District Level Agro meteorological Advisory services, India has seen improved agriculture performance in the rain fed farming (Covers 60% of arable land). Incremental profit due to GKMS is assessed at 25% of the net income. Potential Annual Economic profit by using GKMS by 24% of the community cultivating 4-principle crops (wheat; paddy; sugarcane; cotton) in 2010 was assessed at Rs. 38,463 Crores (when 2.0 million farmers were subscribed to SMS service), the annual profit rose to Rs.42,000 Crores in 2015 (11.5 million farmers have been subscribed to SMS service), Top11- Principal Crops was assessed as 56,310 Crores and top 28- Principal Crops was assessed as Rs. 67,000 Crores in 2015. The study suggests that GKMS has the potential of generating net economic benefit up to Rs.3.3 lakh crores on the 4-principal crops alone when Agro-Meteorological advisory is fully utilized by 90.3 million dependent households.